

## Roberts, Bradley

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**From:** Schumacher, Kelly  
**Sent:** Thursday, October 09, 2014 12:30 PM  
**To:** Roberts, Bradley  
**Cc:** Wooster-Brown, Catherine  
**Subject:** ENSV comments on MRP Soil Investigation Work Plan

RCRA



534451

Brad,

As requested, we have reviewed the "Soil Investigation Work Plan," dated August 29, 2014, for the Former Total Petroleum Refinery, located in Arkansas City, Kansas. Since our comments are fairly brief, I am just sending you an email, but please let us know if you need a formal memo. Please note that I did not review the SOPs and methods for VOC analyses; I assume they are correct, but you may want to verify this. Secondly, the proposed vapor intrusion sampling seems adequate for screening, although I note that MRP does not plan to collect subslab soil gas samples. Since petroleum vapor intrusion is handled differently than chlorinated solvents, collection of shallow groundwater and soil gas samples immediately upstream and downstream of the existing buildings may be a sufficient first step. Please check with Dan Nicoski if you are uncertain. Finally, I do not believe we have seen the final HHRA work plan, for which we had comments about the delineation of the exposure units. However, it appears that MRP will have sufficient data to generate exposure point concentrations, even if the EUs are slightly modified. If you have any other questions or need further assistance, please contact Catherine at x7425 or Kelly at x7963.

### **Ecological Risk Assessment Comments**

EPA Region 7 ecological risk assessors reviewed the 2014 Screening Level Ecological Risk Assessment (SLERA). The SLERA (Sections 3.1.1 and 3.2.1, p. 3-1 and 3-3) stated that historical data are not appropriate for the SLERA and therefore will not be used. Instead, results from the 2010 Exposure Unit Supplemental Soil Investigation (EUSSI) for the Process Area (PA), Junk Storage Area (JSA), and Construction Debris Landfill (CDL) will be used to evaluate ecological exposures. Further, Section 3.2.1 stated that additional soil sampling will be conducted to fill data gaps as described in the Soil Investigation Work Plan for the Site (currently in preparation). However, after a review of the Soil Investigative Work Plan, EPA ecological risk assessors did not find any information pertaining to soils or samples for ecological risk.

EPA ecological risk assessors would appreciate a further explanation of soil samples that will be used in the SLERA (including a map of soil samples for ecological risk only, the number of samples, the depth of the sample, analyte list, how the samples were/will be collected, ecological soil screening levels, etc.). Further, we need to know how the data gaps were determined and the areas where the new soil samples will be collected specifically for ecological risk.

### **Human Health Risk Assessment Comments**

1. **Section 2.3.1 (pp. 2-3 and 2-4).** The objective of the upcoming Phase I soil investigation is to analyze for chromium(VI) in areas where greater than 37 mg/kg total chromium has been detected in soil. The 37 mg/kg value selected for comparison represents a nationwide background average for chromium(VI). Generally, we would have elected to use either a risk-based value or a site-specific background concentration as the comparison value. However, since 37 mg/kg represents an excess individual lifetime cancer risk of 6E-06 and a non-cancer hazard quotient of 0.01 to industrial workers, it may be used.
2. **Section 2.4 (p. 2-4).** Background soil samples for arsenic are proposed at eight locations, from the shallow, medium, and deep intervals. If MRP expects different concentrations at each of the depth intervals (e.g., due to different soil layers), it may not be appropriate to combine all 24 samples when calculating a background value. We suggest adding four additional background sampling locations, for a total of 12 planned samples per depth. This should allow sufficient data for statistical outlier testing and calculating of a background threshold value or values.